AAR-100

Human Factors Newsletter # 00-04

(February 5, 2000 – February 25, 2000)

- **New ISR Checklist:** The IPLT has approved the use of a revised In-Service Review (ISR) Checklist. The ISR checklist has been improved to indicate the AMS phase of applicability, reformatted to align with AMS guidance on requirements, expanded to include missing items, and revised to replace the Deployment Readiness Review (DRR) checklist. This revised ISR checklist is to be used in support of the In-Service Decision process which itself is undergoing revision and further definition. Within the checklist are revised human factors checklist items (items #6A-6E). (Glen Hewitt, AAR-100)

- **RTCA Special Committee 194, Working Group 3:** Human Factors researchers from AND-370, AIR-130, ACT-530, AAM-500, and NASA-Ames participated in meetings of the RTCA Special Committee 194, Working Group 3, to address comments on the human factors requirements for controller-pilot data link communications. Other participants included representatives from the airlines, airline pilots associations, controller union, air traffic requirements service, aviation/avionics/communication industry, and flight certification. The Working Group presented their conclusions about critical issues to the Plenary Session. Further work will be required to resolve the remaining comments. (M. McAnulty, WJHTC; R. Prinzo, CAMI)

- **ASDE-X:** Human Factors researchers from ACT-530 and AAR-100 began work on developing specifications for the controller interface for the Airport Surface Detection Equipment System X (ASDE-X). Meetings were held with representatives of the controllers union, the product team, air traffic requirements, and a prototyping firm. The group reviewed all the system requirements related to the computer interface, and developed initial design requirements for prototyping. (M. McAnulty, K. Allendoerfer, WJHTC; C. Overbey, AAR-100)

- **Research Development and Human Factors Lab:** The latest issue of FAA Aviation News (November/December 1999) contains an article titled "Inside the Research Development and Human Factors Lab." The article was written for general audiences and describes the capabilities of the lab and some of the projects that have been conducted there. (M. McAnulty, WJHTC)

- **AGIE and DSAR:** The Air Ground Integration Experiment (AGIE) is in its last data collection period at the Technical Center. The Decision Support Automation Research (DSAR) study is ready for kick off in early March. The ACT-530 staff welcomes the arrival of two new engineering research psychologists, Dr. Sehchang Hah and Dr. Pam Della Rocco. (E. Stein, WJHTC)

- **DSAR:** Dr. Larry Bailey from the Civil Aeromedical Institute (CAMI) participated in a beta test of experimental equipment proposed for the DSAR experiment. In this test, both workload and kinds of technology (i.e. URET) were varied. The beta test identified several software modifications required prior to the conduct of the experiment next month. (L. Bailey, CAMI)

- **Bayesian Research Conference:** Dr. Julia Pounds traveled to Los Angeles, CA, to participate in the 38th Annual Meeting of the Bayesian Research Conference. During the conference, she presented a paper entitled "CWS: A Performance-based Index of ATC Performance." Dr. Pounds also held a workday with the CWS project team. (J. Pounds, CAMI)

- **FAA/EUROCONTROL Action Plan 12:** Dr. Julia Pounds visited the UK and Luxembourg in support of AAR-100's joint FAA/EUROCONTROL Action Plan 12 Work Tasks 1 and 3. She confered with representatives of EUROCONTROL and the UK's National Air Traffic Services Ltd. (NATS) Human Factors Unit of the Air Traffic Management Development Centre (ATMDC). Briefings were provided on the FAA's human factors research involving application of the Human Factors Analysis and Classification System (HFACS) to ATC operational errors. In addition, the meetings took advantage of planned research simulations. (J. Pounds, CAMI)

- **Aviation Safety/Human Factors Program Planning Team:** Dr. David Schroeder participated in the Aviation Safety/Human Factors Program Planning Team meeting in Arlington, VA. A portion of the meeting was devoted to a discussion of the process involved in the identification and prioritization of CAMI research activities. A process was proposed for handling requirements associated with cabin safety and crash worthiness research conducted under the aeromedical line. Dr. Tom McCloy (AAR-100) provided a briefing on a proposed model for the identification and prioritization of flight deck-related research conducted in support of AIR/AFS sponsors. (D. Schroeder, CAMI; T. McCloy, AAR-100)

- **AVR/AAR Human Factors Research Program Development**: Flight deck human factors research program managers from FAA Headquarters and CAMI met with members of the AVR Flight Deck Human Factors Coordinating Team. The attendees initiated a process to enhance research requirements definition and program development for general aviation, air carrier training, aviation maintenance, flight technologies and procedures, and rotorcraft human factors. (T. McCloy, AAR-100)

- **ATCARS:** A representative from Gallium Incorporated installed interim software developed for the Air Traffic Control Advanced Research Simulator (ATCARS) at CAMI. CAMI researchers assisted in the installation and testing of the software. Future implementations

were enhanced based upon the results of the analyses. Software development and testing will continue until completion of the project. (D. Rester, CAMI)

- **General Aviation Human Factors Research:** Human Factors researchers from CAMI participated in a meeting with Flight Standards sponsors and AAR-100 regarding the General Aviation Human Factors Research program. Discussion focused on activities required to respond to "pop-up" research requirements identified by AIR and AFS sponsors, as well as the process required to identify requirements for FY-01 and FY-02. (D. Schroeder, S. Shappell, CAMI)

More information on human factors research can be found at
the FAA Human Factors (AAR-100) web site http://www.hf.faa.gov

Mark Rodgers
FAA (AAR-100)

CALENDAR

March 6-8, 2000- Flight Safety Foundation, 12th Annual European Aviation Safety Seminar, Grand Hotel Krasnapolsky, Amsterdam

March 7-8, 2000- 25th Annual FAA Aviation Forecast Conference, "Aviation 2000", Washington Convention Center, Washington, DC

March 28-30, 2000- 14th Annual Human Factors in Aviation Maintenance Symposium, "Safety Management: Theory to Practice", Waterfront Centre Hotel, Vancouver, British Columbia, Canada http://www.tc.gc.ca/aviation/mainten/aarpc/hfiam.htm e-mail: boothbj@tc.gc.ca

April 1-6, 2000- Conference on Human Factors in Computing Systems, "CHI 2000", The Hague, The Netherlands http://www.acm.org/sigchi/chi2000 e-mail: CHI2000-office@acm.org

April 11-13, 2000- Advances in Aviation Safety Conference and Exposition, Adams Mark Hotel, Daytona Beach, FL http://www.sae.org/calendar/aas00tag.htm email: jimb@sae.org

April 25–27, 2000- 45th Corporate Aviation Safety Seminar (CASS), The Adam's Mark Hotel, San Antonio, TX http://www.flightsafety.org/cass00_cfp.html

May 9-11, 2000- General Aviation Technology Conference and Exposition, Century II Convention Center, Wichita, KS http://www.sae.org/calendar/gat00/index.htm

May 10-12, 2000- 3rd International Conference on Nonlinear Problems in Aviation and Aerospace, Daytona Beach, FL http://students.db.erau.edu/~siva/conference.html

May 15-18, 2000- 4th Joint DOD/FAA/NASA Conference on Aging Aircraft, St. Louis, MO http://www.aging2000.com

June 6-8, 2000- Digital Human Modeling for Design and Engineering (DHM) Conference and Exposition, Hyatt Regency, Dearborn, MI http://www.sae.org/calendar/dhm00/index.htm

June 13-16, 2000- 3rd International Air Traffic Management R&D Seminar, "ATM-2000", Napoli, Italy http://atm-seminar-2000.eurocontrol.fr

June 20-22, 2000- Threats, Countermeasures, and Situational Awareness: Teaming for Survivability, The Virginia Beach Pavilion and Convention Center, Virginia Beach, VA http://corp-nt20.nawcad.navy.mil/nawcad/news/sit_aware/2000/

July 30 – August 4, 2000- 14th Triennial Congress of the International Ergonomics Association and the Human Factors and Ergonomics Society 44rd Annual Meeting "IEA 2000/HFES 2000", San Diego Marriott Hotel and Marina, San Diego, CA http://iea2000.hfes.org/

August 27-September 1, 2000- 22nd International Council of the Aeronautical Sciences (ICAS) Congress, Harrogate, UK http://www.aiaa.org/calendar/icas00cfp.html

October 10-12, 2000- World Aviation Congress and Exposition, Town and Country Hotel, San Diego, CA http://www.sae.org/calendar/wac00/index.htm

October 15-19, 2000- Human Performance, Situation Awareness & Automation: User-Centered Design for a New Millennium, Marriott Riverfront, Savannah, GA http://www.ie.msstate.edu/hpsaa/index.html

Note: Calendar events in Italics are new since the last Newsletter

Comments or questions regarding this newsletter?
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